

Notice of Allowability	Application No.	Applicant(s)	
	09/942,419	FISCHER ET AL.	
	Examiner Fred Ferris	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- This communication is responsive to 12 September 2005.
- The allowed claim(s) is/are 14-18 (now renumbered as 1-5).
- Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - All
 - Some*
 - None
 of the:
 - Certified copies of the priority documents have been received.
 - Certified copies of the priority documents have been received in Application No. _____.
 - Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) hereto or 2) to Paper No./Mail Date _____.
 - including changes required by the attached Examiner's Amendment / Comment or in the Office action of
Paper No./Mail Date 4/14/05-Fig. 7.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
- DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- Notice of References Cited (PTO-892)
- Notice of Draftsperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
- Examiner's Comment Regarding Requirement for Deposit
of Biological Material
- Notice of Informal Patent Application (PTO-152)
- Interview Summary (PTO-413),
Paper No./Mail Date _____.
- Examiner's Amendment/Comment
- Examiner's Statement of Reasons for Allowance
- Other _____.

Fred Ferris
FRED FERRIS 2128

DETAILED ACTION

1. *Claims 1-20 have been presented for examination based on applicant's After Final amendment filed on 12 September 2005. Applicants have now cancelled claims 1-13 and 19-20. Claims 14-18 remain pending in this application and were previously allowed over the prior art of record.*

Response to Arguments

2. *Applicant's arguments filed 12 September 2005 have been fully considered and found to be persuasive. Previous objection and rejections are now withdrawn in view of applicant's cancellation of claims 1-13 and 19-20. Accordingly, this application is now in condition for allowance.*

Allowable Subject Matter

3. *Claims 14-18 have been allowed over the prior art of record.*

The following is an examiner's statement of reasons for allowance:

Applicants are disclosing a tetrahedralization filter for associating subdivided mesh elements with a DOF value from a directory. This has been disclosed in the prior art of record. While these features are individually disclosed in the prior art, the prior art of record does not meet the conditions as suggested in MPEP section 2132, namely:

"The identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this

*is not an **ipsissimis verbis** test, i.e., identity of terminology is not required. **In re Bond**, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990)."*

In particular, the prior art of record does not disclose the specific arrangement of elements consisting of a receiver for non-conformal mixed element mesh data, a processor dynamically associating subdivided DOF elements, and an element subdivider discriminating subdivision based on DOF directory, as recited in independent claim 14 and disclosed in applicants specification on page 8, line 11 to page 13, line 29 and in Figures 4-7 (especially new Figure 7).

The prior art of record discloses elements of the claimed invention as follows:

- "Efficient Subdivision of Finite-Element Datasets into Consistent Tetrahedra", G. Albertelli: Teaches subdividing unstructured mesh elements of a non-conformal mixed element mesh which is sub-dividable into tetrahedral but does not disclose the specific arrangement of elements realizing a tetrahedralization filter inclusive of a receiver for non-conformal mixed element mesh data, a processor dynamically associating subdivided DOF elements, and an element subdivider discriminating subdivision based on the DOF directory, as recited in independent claim 14.

- "Bounds on the Size of Tetrahedralizations", B. Chazelle et al: Teaches dynamically checking for the addition of Steiner points during tetrahedralization by reducing to the lowest value (one) for the degrees of freedom (DOF), but again, does not disclose the specific arrangement of elements realizing a tetrahedralization filter inclusive of a receiver for non-conformal mixed element mesh data, a processor dynamically

associating subdivided DOF elements, and an element subdivider discriminating subdivision based on the DOF directory, as recited in independent claim 14.

The features noted above relating to the specific arrangement of elements as recited in the independent claim 14 renders the claimed invention non-obvious over the prior art of record. Dependent claims 15-18 are deemed allowable as depending directly from claim 14.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. *Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 571-272-3778 and whose normal working hours are 8:30am to 5:00pm Monday to Friday. Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 571-272-3700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached at 571-272-3780. The Official Fax Number is: (703) 872-9306*

*Fred Ferris, Patent Examiner
Simulation and Emulation, Art Unit 2128
U.S. Patent and Trademark Office
Randolph Building, Room 5D19
401 Dulany Street
Alexandria, VA 22313
Phone: (571-272-3778)
Fred.Ferris@uspto.gov
September 26, 2005*

*FH
Av 21 28*